

Application No. 10/500,366
Amendment dated
Reply to Office Action of September 13, 2005

Docket No.: 22106-00060-US1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Canceled)
2. (Currently amended) The method ~~for mutually welding a plate and a copper body according to claim 1, characterized in that~~ according to claim 21, wherein starting welding occurs by focusing the laser means on a point of the copper body proximate to the joint between the surface of said copper body and the face of said plate.
3. (Currently amended) The method ~~for mutually welding a plate and a copper body according to claim 1, characterized in that~~ according to claim 21, wherein the angle of incidence of said laser means with respect to the perpendicular to the surface to be welded is between 5 and 20°.
4. (Currently amended) The method ~~for mutually welding a plate and a copper body according to claim 1, characterized in that~~ according to claim 21, wherein at least 70% of the molten material formed by welding lies, with respect to on a side of the joint, on the side that belongs to the copper body.
5. (Currently amended) The method ~~for mutually welding a plate and a copper body according to claim 1, characterized in that~~ according to claim 21, wherein said laser means comprise a solid-state laser.
6. (Currently amended) The method ~~for mutually welding a plate and a copper body according to claim 1, characterized in that~~ according to claim 21, wherein said plate comprises at least one layer based on alloys of Ag and at least one copper layer.

Application No. 10/500,366

Docket No.: 22106-00060-US1

Amendment dated

Reply to Office Action of September 13, 2005

7. (Currently amended) The method according to claim 6, ~~characterized in that wherein~~ the copper layer of ~~said plate~~ constitutes the said one face of the plate that is superimposed and coupled on the copper body.

8. (Currently amended) The A contact element obtained with a method for welding a plate comprising at least one layer based on Ag alloys to a copper body, said method comprising: according to claim 1

superimposing and coupling one face of said plate on a surface of said copper body;

starting welding by focusing a laser means on a point located proximate to a joint between said one face and said surface;

maintaining an angle of incidence of said laser means at values other than 0° with respect to the perpendicular to the surface to be welded; and

moving the laser means with respect to the joint while keeping a component of the angle of incidence of said laser means oriented along the same direction as relative motion between said laser means and said joint, so as to obtain an elongated weld.

9. (Currently amended) The contact element according to claim 8, ~~characterized in that wherein~~ said copper body is the moving contact of a low-voltage contactor or circuit breaker.

10. (Currently amended) The contact element according to claim 8, ~~characterized in that wherein~~ said copper body is the fixed contact of a low-voltage contactor or circuit breaker.

11. (Currently amended) A low-voltage circuit breaker, ~~characterized in that it comprises~~ comprising one or more contact elements according to claim 9.

12. (Currently amended) A low-voltage contactor, ~~characterized in that it comprises~~ comprising one or more contact elements according to ~~one of claims 8 or~~ claim 9.

Application No. 10/500,366

Docket No.: 22106-00060-US1

Amendment dated

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13. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 2, ~~wherein characterized in that~~ at least 70% of the molten material formed by welding lies, ~~with respect to on a side of the joint, on the side that belongs to the copper body.~~

14. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 3, ~~wherein characterized in that~~ at least 70% of the molten material lies formed by welding lies, ~~with respect to on a side of the joint, on the side that belongs to the copper body.~~

15. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 2, ~~characterized in that~~ wherein said laser means comprise a solid-state laser.

16. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 3, ~~characterized in that~~ wherein said laser means comprise a solid-state laser.

17. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 4, ~~characterized in that~~ wherein said laser means comprise a solid-state laser.

18. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 2, ~~characterized in that~~ wherein said plate comprises ~~at least one layer based on alloys of Ag and~~ at least one copper layer.

19. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 3, ~~characterized in that~~ wherein said plate comprises ~~at least one layer based on alloys of Ag and~~ at least one copper layer.

20. (Currently amended) The method ~~for mutually welding a plate and a copper body~~ according to claim 4, ~~characterized in that~~ wherein said plate comprises ~~at least one layer based on alloys of Ag and~~ at least one copper layer.

21. (New) A method for welding a plate comprising at least one layer based on Ag alloys to a copper body, said method comprising:

Application No. 10/500,366

Docket No.: 22106-00060-US1

Amendment dated

Reply to Office Action of September 13, 2005

superimposing and coupling one face of said plate on a surface of said copper body;

starting welding by focusing a laser means on a point located proximate to a joint between said one face and said surface;

maintaining an angle of incidence of said laser means at values other than 0° with respect to the perpendicular to the surface to be welded; and

moving the laser means with respect to the joint while keeping a component of the angle of incidence of said laser means oriented along the same direction as relative motion between said laser means and said joint, so as to obtain an elongated weld.